UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,235	08/22/2001	Andreas Kellner	DE000126	8684

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER
CHAWAN, VIJAY B

ART UNIT	PAPER NUMBER
2626	

DATE MAILED: 04/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *2/20/06*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Objections

1.   Claims 1, 7, 8, and 9 are objected to because of the following informalities:

Should the word "determine" be "determined"? Appropriate correction is required.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1-9 are rejected under 35 U.S.C. 103(a) Kishi et al., (EP 0 094 449 A1) in

view of Goldberg et al., (5,970,446).

        As per claim 1, Kishi et al., (EP 0 094 449) teach a method of controlling function

units of a motorcar, or of devices (1a, 1b) installed in a motorcar, by means of speech

signals, the method comprising the steps of:

        receiving acoustic signals occurring in the motorcar, which contain noise signal

portions that depend on the operating state and/or operation environment of the

motorcar and speech signal portions (page 5, line 13 – page 6, line 17, page 10, lines 2-

19); and,

applying the received acoustic signals to a speech recognition system (3) (page

5, line 13 – page 6, line 17, page 10, lines 2-19).

Kishi et al., however, do not specifically teach a speech recognition system using

acoustic references (8), which are selected and/or adapted in dependence on estimated

noise component introduced by the operating state and/or operation environment,

wherein said estimated noise component is determined during at least one period

containing a noise signal portion but no speech signal portion. Goldberg et al., do teach

a speech recognition system using acoustic references, which are selected and/or

adapted in dependence on estimated noise component introduced by the operating

state and/or operation environment wherein said estimated noise component is

determined during at least one period containing a noise signal portion but no speech

signal portion (Col.2, lines 8-53, specifically in lines 33-36, where models can be

created by recording background noise and clean speech implying estimated noise

component is determined during at least one period containing a noise signal portion

but no speech signal portion).

Therefore, it would have been obvious to one with ordinary skill in the art at the

time of invention to use the method of estimating noise component introduced by the

operating state and/or environment as disclosed by Goldberg et al., in the method of

Kishi et al., because, an artisan would readily recognize that this would provide a robust

speech recognition system that would effectively function in various noisy backgrounds

(Goldberg et al., Col.1, lines 61-63).

As per claim 2, Kishi et al., teach a method as claimed in claim 1, wherein acoustic basic reference (20-1, ..., 20-n, 30-1, ..., 30-n) are selected to be used for a speech pause modeling in dependence on the operating state and/or the operation environment of the motorcar (page 5, line 13 – page 6, line 22).

As per claim 3, Kishi et al., teach a method as claimed in claim 2, wherein an adaptation is provided (22, 32-1, ..., 32-n) of the selected acoustic basic references in dependence on the operating state and/or operation environment of the motorcar (page 5, line 13 – page 6, line 22, page 7, line 15 – page 8, line 14).

As per claim 4, Kishi et al., teach a method as claimed in claim 1, wherein for the speech pause modeling, acoustic basic references are combined (31) in dependence on the operating state and/or operation environment of the motorcar (page 10, lines 2-13).

As per claim 5, Kishi et al., teach a method as claimed in claim 1, further comprising the step of determining operating state and/or operation environment of the motorcar from an on-board computer (11) of the motorcar and/or by means of one or more detectors (13) installed in the motorcar (abstract, page 15, line 16 – page 16, line 5).

As per claim 6, Kishi et al., teach a method as claimed in claim 1, wherein parts of a vocabulary (9) of the speech recognition system (3) are determined (13) that represent speech control signals that have their effect on the control of function units of the motorcar or on devices installed inside the motorcar (page 5, line 13 – page 6, line 17, page 10, lines 2-19).

As per claim 7, Kishi et al., teach an arrangement for controlling function units of a motorcar, or of devices (1a, 1b) installed in a motorcar by means of speech signals, the arrangement:

comprising at least one microphone (2) for converting acoustic signals occurring in the motorcar, which acoustic signals contain noise signal portions that depend on the operating state and/or operation environment of the motorcar and, as the case may be, speech signal portions, and, a speech recognition system (3) coupled to the microphone (2) for recognizing speech signal portions of the acoustic signals (page 5, line 13 – page 6, line 17, page 10, lines 2-19).

Kishi et al., however, do not specifically teach a speech recognition system using acoustic references (8), which are selected and/or adapted in dependence on estimated noise component introduced by the operating state and/or operation environment. Goldberg et al., do teach a speech recognition system using acoustic references, which are selected and/or adapted in dependence on estimated noise component introduced by the operating state and/or operation environment wherein said estimated noise component is determined during at least one period containing a noise signal portion but no speech signal portion (Col.2, lines 8-53, specifically in lines 33-36, where models can be created by recording background noise and clean speech implying estimated noise component is determined during at least one period containing a noise signal portion but no speech signal portion).

Therefore, it would have been obvious to one with ordinary skill in the art at the time of invention to use the system of estimating noise component introduced by the operating state and/or environment as disclosed by Goldberg et al., in the arrangement of Kishi et al., because, an artisan would readily recognize that this would provide a robust speech recognition system that would effectively function in various noisy backgrounds (Goldberg et al., Col.1, lines 61-63).

As per claim 8, Kishi et al., teach a method for controlling a device via speech signals, in which acoustic signals which contain noise signal portions that depend operating state of the device and/or the operation environment of the device and, as the case may be, speech signal portions, are applied to a speech recognition system (page 5, line 13 – page 6, line 17, page 10, lines 2-19).

Kishi et al., however, do not specifically teach a speech recognition system using acoustic references (8), which are selected and/or adapted in dependence on estimated noise component introduced by the operating state and/or operation environment. Goldberg et al., do teach a speech recognition system using acoustic references, which are selected and/or adapted in dependence on estimated noise component introduced by the operating state and/or operation environment wherein said estimated noise component is determined during at least one period containing a noise signal portion but no speech signal portion (Col.2, lines 8-53, specifically in lines 33-36, where models can be created by recording background noise and clean speech implying estimated noise component is determined during at least one period containing a noise signal portion but no speech signal portion).

Therefore, it would have been obvious to one with ordinary skill in the art at the time of invention to use the method of estimating noise component introduced by the operating state and/or environment as disclosed by Goldberg et al., in the method of Kishi et al., because, an artisan would readily recognize that this would provide a robust speech recognition system that would effectively function in various noisy backgrounds (Goldberg et al., Col.1, lines 61-63).

As per claim 9, Kishi et al., teach an arrangement comprising a device for controllable via speech signals, in which acoustic signals which contain noise signal portions that depend operating state of the device and/or the operation environment of the device and, as the case may be, speech signal portions, are applied to a speech recognition system (page 5, line 13 – page 6, line 17, page 10, lines 2-19).

Kishi et al., however, do not specifically teach a speech recognition system using acoustic references (8), which are selected and/or adapted in dependence on estimated noise component introduced by the operating state and/or operation environment. Goldberg et al., do teach a speech recognition system using acoustic references, which are selected and/or adapted in dependence on estimated noise component introduced by the operating state and/or operation environment wherein said estimated noise component is determined during at least one period containing a noise signal portion but no speech signal portion (Col.2, lines 8-53, specifically in lines 33-36, where models can be created by recording background noise and clean speech implying estimated

noise component is determined during at least one period containing a noise signal

portion but no speech signal portion).

Therefore, it would have been obvious to one with ordinary skill in the art at the

time of invention to use the method of estimating noise component introduced by the

operating state and/or environment as disclosed by Goldberg et al., in the method of

Kishi et al., because, an artisan would readily recognize that this would provide a robust

speech recognition system that would effectively function in various noisy backgrounds

(Goldberg et al., Col.1, lines 61-63).

Response to Arguments

4.   Applicant's arguments filed 2/20/2006 have been fully considered but they are

not persuasive.

5.   In response to applicant's arguments against the references individually, one

cannot show nonobviousness by attacking references individually where the rejections

are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208

USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir.

1986).

6.   Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not

clearly point out the patentable novelty which he or she thinks the claims present in view

of the state of the art disclosed by the references cited or the objections made. Further,

they do not show how the amendments avoid such references or objections.

Applicant argues that the references alone or in combination do not teach the

claimed estimated noise component being determined during at least one period

containing a noise signal portion but no speech signal portion. Examiner disagrees.

Goldberg et al., do teach a speech recognition system using acoustic references, which

are selected and/or adapted in dependence on estimated noise component introduced

by the operating state and/or operation environment wherein said estimated noise

component is determined during at least one period containing a noise signal portion

but no speech signal portion (Col.2, lines 8-53, specifically in lines 33-36, where models

can be created by recording background noise and clean speech implying estimated

noise component is determined during at least one period containing a noise signal

portion but no speech signal portion).

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Vijay B. Chawan whose telephone number is (571) 272-

7601. The examiner can normally be reached on Monday Through Friday 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Richemond Dorvil can be reached on (571) 272-7602. The fax phone

number for the organization where this application or proceeding is assigned is (571)

273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Vijay B. Chawan
Primary Examiner
Art Unit 2654

vbc
4/25/06

**VIJAY CHAWAN
PRIMARY EXAMINER**